I would like to thank the Senate of the University of Malta for granting me the privilege and the honour to deliver the following oration on this solemn occasion. Today, graduands from various disciplines within well-established Faculties of our University, namely the Faculties of Engineering, Information and Communication Technology, Medicine and Surgery, Science, as well as the Institute of Health Care will be receiving their hard-earned degree. The multidisciplinary gathering is ample evidence of the rich diversity which the University of Malta enjoys, and on which it can capitalise both academically and professionally. Indeed, it is this diversity that has influenced my choice as regards the theme for this oration, in which I will be focusing on interdisciplinarity and team working in academia and professional practice.

The philosopher Roland Barthes views interdisciplinarity as a transformative process which brings together distinct disciplines and results in new ideas and new forms of knowledge. Barthes proposes that for interdisciplinarity to materialise, this requires much more than gathering different disciplines together. Barthes writes:

> Interdisciplinarity is not the calm of an easy security; it begins effectively (as opposed to the mere expression of a pious wish) when the solidarity of the old disciplines breaks down...in the interests of a new object and a new language neither of which has a place in the field of sciences that were to be brought peacefully together, this unease in classification being precisely the point from which it is possible to diagnose a certain mutation.

(Barthes, 1977, p.155)

Drawing on Barthes notion of interdisciplinarity, I will argue that we are living in a rapidly-mutating technological world wherein the boundaries between one discipline and another are being constantly blurred and redefined. Although the challenges for tertiary level educational and research institutions can be daunting, at the same time they urge us to look beyond the traditional disciplinary boundaries in an exciting, innovative and entrepreneurial fashion. The major innovations that came about as a result of research collaborations between the fields of engineering, health sciences, ICT, medicine, and the traditional sciences that have revolutionised knowledge and professional practice are a case in point.

Allow me, therefore, to consider biomedical engineering and bioinformatics as relatively new fields which provide us with fine examples of interdisciplinarity. The National Institutes of Health define biomedical engineering as the integration of “physical, chemical, mathematical, and computational sciences and engineering principles to study biology, medicine, behaviour, and health. It advances fundamental concepts; creates knowledge from the molecular to the organ systems level; and develops innovative biologics, materials, processes, implants, devices and informatics approaches for the prevention, diagnosis, and treatment of disease, for patient rehabilitation, and for improving health” (NIH, 1997). Concrete applications of biomedical engineering include biocompatible prostheses, pharmaceutical drugs, and imaging equipment such as Magnetic Resonance Imaging and Positron Emission Tomography. The bringing together of the design and problem solving skills in engineering with the expertise from medical and biological sciences has led to improvements in the quality of life of patients. The emergence of bioinformatics and computational biology has led to major breakthroughs namely, gene finding, genome assembly and prediction of gene expression. Therefore, when researchers face
the most testing issues and problems that cannot be understood through the lens of a single
discipline, they are bound to move towards interdisciplinarity.

Needless to say, the paradigm shift towards interdisciplinarity does not mean
abandoning undisciplinary specialization or drastically moving away from traditional study
programmes. Rather, interdisciplinarity means dialogue, interaction and integration between two
or more disciplines with a specific and clear purpose, and working in a team climate. As the
American anthropologist Clifford Geertz remarks, “there has been enormous amount of genre
mixing in intellectual life” leading to the “refiguration of social thought” (1983, p.20). Our
University has already started to recognise the importance of this type of interdisciplinarity not
only in some of its course programmes, but also in specific albeit small research projects,
thanks to the collaboration between several departments. However, I believe that we still have a
long way to go to be able to claim with confidence that interdisciplinary collaboration in teaching
and research at our University is bearing the fruit that is becoming increasingly necessary in the
world of today.

With the challenges that interdisciplinarity offers, it is not surprising that it can be considered as
one of today’s most heatedly argued critical debates. Joe Moran is particularly eloquent on the
issue of interdisciplinarity which he defines with the following words:

Interdisciplinarity can form part of a more general critique of academic
specialization as a whole, and of the nature of the university as an institution that
cuts itself off from the outside world in small enclaves of expertise. Interdisciplinary approaches often draw attention, either implicitly or explicitly, to
the fact that what is studied within universities is always a political question. As
the composite nature of the term itself suggests, ‘interdisciplinarity’ assumes the
existence and relative resilience of disciplines as modes of thought and
institutional practices.

(Moran, 2002, p.16)

Moran’s definition of interdisciplinarity can be applied to medical and health care
education and training. Over the past 150 years, health care delivery has expanded from what
was largely a social service provided by individual practitioners to a complex system provided
by teams of professionals, usually operating within institutions and using sophisticated
technology. Indeed, faced with new forms of service delivery, a rise in patient expectations, staff
shortages and a need for cost containment, health care is increasingly emphasising the
interdisciplinary team approach in which all health care professionals adopt and develop new
skills while striving to improve the quality of health care and patient satisfaction. The best way to
achieve these objectives is to look at health services through the patients’ eyes. For example,
patients are presenting more and more with multiple pathologies, intertwined with a diversity of
psychosocial problems, mostly due to an aging population, changing family structures and
increasingly complex social issues. The response of health and social services has been a
paradigm shift in the philosophy of patient management, namely the promotion of a wellness
rather than an illness approach, as well as the adoption of the bio-psychosocial model as
guiding professional practice. This has encouraged a holistic approach whereby integrated care
plans do not just follow the medical conditions’ guidelines, protocols, and critical pathways, but
incorporate an attempt to solve the psychosocial issues, which patients present with, often as
part of their hidden agendas. Moreover, health care organizations are obliged to follow the
system of Clinical Governance, in which they are held accountable to continue to push for
clinical excellence. Against this background, I argue that solo attempts by doctors and other
health care professionals to manage these situations have become less feasible. Therefore
building and maintaining health care teams may be the key to tackle fragmentation and provide
patients with a complete package of care (Drinka & Clark, 2000).
In the late 80’s, the University of Malta acknowledged that with the advances in medical knowledge, technology and health service delivery, a new approach in the education and training of all the health care professions, without exception, was sorely needed. The mission statement set forth by the Institute of Health Care, which was set up twenty years ago as an interfaculty Institute to develop diploma, degree and post-graduate courses in nursing, midwifery and allied health sciences, expresses such a need. It states: “The Institute of Health Care aims to achieve excellence in the education and training of reflective, caring and accountable health professionals in response to the health and health care needs of the population.” We can proudly claim that we are striving to achieve these objectives in more ways than one. Indeed, the majority of the academic members of staff have honoured their commitment in successfully achieving the required academic qualifications for tertiary-level education. Despite limitations in resources, we are now focusing more and more on strengthening the research output. Our major goal, however, remains that of being instrumental in the development of effective interdisciplinary health care teams by bringing together disciplines not just from an administrative point of view, but also philosophically.

The Institute of Health Care plays a key role in providing most of the human resources that are needed for the proper functioning of the Maltese health services. As the number of courses and students continue to increase, and as we are constantly being challenged to prepare our graduates for changing environments, and newer ways of working, then the Institute of Health Care must invest well and continue to expand and grow. Irrespective of its future status within the University, the focus on interdisciplinarity must not be lost.

The Faculty of Medicine and Surgery, of which I am proud to be a graduate, dates back to 1676, when Grand Master Nicolo Cotoner founded a School of Anatomy and Surgery at the Sacra Infermeria, making it one of the oldest in Europe and the oldest in the British Commonwealth outside the United Kingdom. There is no doubt that the Faculty of Medicine and Surgery at the University of Malta enjoys great prestige and adds immensly to the richness in tradition and heritage of our Alma Mater. In fact, some of the finest and world-renowned doctors are graduates of this University. In my opinion, however, medical education faces great challenges and needs to recognise and embrace the changes in education across all the health care professions, and to be more open to collaboration. Sir Charles George (1999), former chairperson of the Education Committee of the British General Medical Council and former Dean of the Faculty of Medicine in Southampton referred to team working as an essential prerequisite to modern clinical care and strongly recommended that this should also be reflected in medical and health sciences curricula.

Unfortunately, undergraduate education is still largely based on individual disciplines rather than on the concept of shared learning. Consequently, students enrolled in undergraduate programmes have little contact with each other and are offered still less collaborative learning experiences designed to promote interdisciplinary or interprofessional health care team relationships. This concern has led the Institute of Health Care to collaborate with the Department of Medicine at the Faculty of Medicine and Surgery in starting to organize interdisciplinary seminars utilizing the case study approach, precisely to stimulate our students to learn, think, function and work together in an interdisciplinary fashion with the ultimate aim of providing a single and integrated care plan for the patient in the study. Well-established Universities in Australia, Canada, United Kingdom, and United States have already introduced interdisciplinary study programmes featuring a number of knowledge areas common to all the health professions, which is to say health systems, nutrition, bioethics, communication skills, health economics, growth and development, leadership skills, physical and psychological assessment, and team dynamics. Others have also introduced several levels of clinical experience for pre-professional and professional students, conducted under the supervision of an interdisciplinary faculty team recruited from the various professional faculties.
We are living an era of evidence-based medicine and evidence-based practice. To convince those who are still sceptical about interdisciplinarity and team working in health care, there is now ample evidence that suggests that working in interdisciplinary teams results in reduced hospitalisation and health service costs, improved service provision, reduced error rates, lower patient mortality and improved health, enhanced patient satisfaction, greater staff motivation and well-being, and innovations in patient care (Borriil et al., 2001; West et al., 2002). On the other hand, one must be aware of the potentially avoidable barriers to team working such as interprofessional and interpersonal rivalry, status and hierarchy effects, and social loafing. There is evidence that these problems can be tackled through well-defined and effective team leadership. Furthermore, ethical issues arise in three major areas namely, challenges arising from being a team, the locus of authority for team decisions, and the role of the patient as team member (Purtilo, 1995). Therefore, it is becoming a necessity for doctors, nurses and other health care professionals to acquire skills beyond the clinical and medical competences. To become effective team players, they require the acquisition of knowledge competencies such as knowledge of team mission, objectives, norms, and resources; skill competencies such as leadership, conflict resolution, closed-loop communication and information exchange; and attitude competencies such as collective efficacy, shared vision and mutual trust.

In all this, it is highly important that the University remains close to its stakeholders. The cooperation and coordination with our principal client, namely the Department of Health is not only necessary, but crucial for the continued success and relevance of both the Faculty of Medicine and Surgery, and the Institute of Health Care. The future of health care education in Malta promises to be even more exigent but exciting than ever before. The state-of-the-art premises of Mater Dei Hospital, which will give us a better chance of honouring our academic and professional commitments to Maltese students and to international ones alike, as well as the dedication of staff at both the Faculty of Medicine and Surgery, and the Institute of Health Care will undoubtedly stand us in good stead in continuing our roadmap to excellence in medical and health care education.

To conclude, I would like to congratulate all the graduands from the different faculties and those from the Institute of Health Care on your academic achievements. I also would like to congratulate your families for your success. I am sure your parents in particular have been instrumental in supporting you throughout your educational journey. Today is a great day for all of you as you look forward to translate in the world of work and professional practice, what you have successfully been educated and trained for. Others amongst you may already be thinking of furthering your studies or moving into the world of research. Your qualifications will serve you well to move forward in your careers and in securing better job opportunities. However your positive knowledge, values, attitudes and beliefs will provide you with the right tools to face the world brightly and confidently. The need to remember that you are still on a journey of life-long learning and therefore to recognise that irrespective of how much you know, you can never know it all or know enough. Last but not least to be open to new ideas in a spirit of collaboration. I sincerely hope that in whatever you choose to do, you will find satisfaction and fulfilment in your careers.

References


